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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,256	01/22/2002	Anders Dale	HGS-001	6746

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EXAMINER

ROY, BAISAKHI

ART UNIT PAPER NUMBER

3737

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055.256

Applicant(s)

DALE ET AL.

Examiner

Baisakhi Roy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-48, 50-52, 54-58 and 69-95 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-48, 50-52, 54-58 and 69-95 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/2/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/2/05 have been fully considered but they are not persuasive. With respect to claims 46-48, 50-52, and 54-58, deCharms teaches tissue type prior probability corresponding to a tissue type ([0614-0615]). Refer back to previous action for rejection of above claims. Applicant's arguments with respect to storing at least two magnetic property values is not persuasive and attention is directed to paragraphs [0264] and [0525], which states collecting T1 and/or T2 weighted image data.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 69-91 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims are directed to an atlas implemented in software and therefore not considered to be implemented in a tangible medium.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 46-48, 50-52, and 54-58 are rejected under 35 U.S.C. 102(e) as being anticipated by deCharms (20020103428). deCharms discloses a system and method for obtaining information regarding a subject by using a magnetic resonance scanner, an atlas comprising values representative of the magnetic property of a spatial location of a subject, a processor adapted to receive information from the scanner and configured to read the atlas to determine volumetric measurements of organ structures of the subject, and determining alignment of the MR scan based on the atlas ([0160] [0164] [0167] [0178] [0326-0330]). deCharms teaches said atlas to include a plurality of nodes with each node including statistical information such as mean and variance derived from a number of subjects of a specific population and for a specific scanner model for a specific magnetic resonance sequence ([0180] [0256] [0264] [0270] [0326] [0328] [0329] [0439] [0465] [0471] [0485] [0525] [0625]). deCharms teaches a system and method for obtaining information regarding a subject, as set forth above, by providing magnetic property values corresponding to tissue types and subject, labeling tissue types corresponding the magnetic resonance property values pertaining to the subject by the use of the atlas having said MR values derived from other subjects, providing and recording a magnetic property value in a node of the atlas corresponding to a voxel of said first magnetic resonance modality volume. The reference further

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teaches correcting distortion of the each of the magnetic resonance modality volumes caused by motion during acquisition ([0260] [0449]).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 69-95 are rejected under 35 U.S.C. 102(e) as being anticipated by VanEssen et al. (6591004). VanEssen et al. disclose a method and apparatus for obtaining a MR scan of subject, providing an atlas including a plurality of nodes corresponding to a plurality of voxels representing spatial locations of a subject, each of the nodes configured to store magnetic property values for each of the voxels, and a processor adapted to receive information from the scanner pertaining to the MR scan and to read the atlas (abstract, col. 20 lines 10-16, col. 25 lines 20-55, col. 34 lines 5-22), VanEssen et al. teach said magnetic property value to correspond to a tissue type

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at one or more voxels (fig. 8, col. 12 lines 13-22, col. 23 lines 21-25), tissue type prior probability corresponding to the tissue type (col. 9 lines 43-67, col. 10 lines 1-24 lines 45-57, col. 44 lines 55-65). VanEssen et al. further teach determining the mean and variance for the tissue type (col. 13 lines 30-37, col. 23 lines 28-39, col. 28 lines 40-44, col. 29 lines 58-65).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 69-95 are rejected under 35 U.S.C. 102(e) as being anticipated by deCharms (20020103428). deCharms discloses an atlas comprising a value representative of a magnetic property of a spatial location of a subject with said value corresponding to a tissue type proton density, T1, and T2 value ([0188-0189] [0193] [0221] [0264] [0459-0460] [0525] [0619-0620]). deCharms further teaches said value to correspond to a diffusion tensor imaging and a T2* value ([0377] [0460] [0525] [0645]). deCharms teaches said atlas comprising values representative of a statistical representation of a magnetic property of a plurality of spatial locations of a plurality of subjects with said statistical representation to include a mean, variance, probability

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values of a tissue type at each corresponding spatial location of the subjects ([0346] [0354] [0376] [0414] [0435] [0439] [0441] [0465] [0467] [0471] [0485] [0614-0615]). deCharms teaches said values of a statistical representation to be scanner-specific, ([0180] [0189] [0256] [0264] [0270] [0326] [0328] [0329]). deCharms teaches said values of a statistical representation to include a value from TR, TE, and flip angle ([0270] [0628]).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baisakhi Roy whose telephone number is 571-272-7139. The examiner can normally be reached on M-F (7:30 a.m. - 4p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B.R.
BR


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